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HISTORIC AMERICAN ENGINEERING RECORD

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Jet Propulsion Laboratory Edwards Facility
Test Stand A, Building 4202/E-3
Edwards Air Force Base
Boron Vicinity
Kern County
California

HAER No. CA-163-A

Photographers' Credits:

Credit BG: Brian Grogan, Yosemite Photographics, Inc.
December 1994/January 1995

Credit JPL: JPL staff photographers, Jet Propulsion
Laboratory, Edwards Facility (names undetermined, dates
cited in captions)

Credit GE: George Emmerson, Photographer, Jet Propulsion
Laboratory, Edwards Facility (dates cited in captions)

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domain, having been completed under U.S. Government funding.

- CA-163-A-1** Credit GE. Photographic copy of photograph, test
Stand "A" reinforced concrete foundation under
construction as seen from the southeast. Formwork
is being removed as refractory brick lining is
being laid in flame pit at the center. (JPL
negative no. 383-763, 8 March 1945)
- CA-163-A-2** Credit GE. Photographic copy of photograph,
refractory brick lining being laid in Test Stand
"A" flame pit to protect concrete from heat of
rocket engine flames. (JPL negative no. 383-764, 8
March 1945)
- CA-163-A-3** Credit GE. Photographic copy of photograph, east
elevation of "A" stand on 29 August 1945. A steel
frame has been erected for a travelling hoist, and
propellant lines are visible to the right (north)
of the stand, rising from storage tanks installed
in the north side of the stand. To the east of the
flame pit is a concrete water pond and sump
designed to cool rocket engine exhaust. Exhaust
was directed east in the direction of prevailing
winds. (JPL negative no. 383-940-A, 29 August
1945)

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- CA-163-A-4** Credit GE. Photographic copy of photograph, looking northeast into "A" stand flame trench as seen from the southeast corner of "A" stand foundation. The concrete construction at the bottom of the trench is a water pond with sump for cooling rocket engine plumes before they blow into the desert to the east. (JPL negative no. 383-940-B, 29 August 1945)
- CA-163-A-5** Credit GE. Photographic copy of photograph, completed flame pit in Test Stand "A" with steel plate flame deflector over refractory brick. (JPL negative no. 383-1033, 17 January 1946)
- CA-163-A-6** Credit GE. Photographic copy of photograph, view looking east at Test Stand "A" during test firing of a liquid-fueled Corporal engine. Structure in immediate left foreground of view appears to be a propellant tank enclosure (JPL negative no. 383-1225, July 1945); compare HAER CA-163-A-7 for enclosure.
- CA-163-A-7** Credit JPL. Photographic copy of photograph, view south on west side of Test Stand "A" during excavation for new intra-stand tunnel system. Note equipment, tanks and piping installed in tower. (JPL negative no. 384-1540-D, 7 January 1957)
- CA-163-A-8** Credit JPL. Photographic copy of photograph, view west down from Test Stand "A" tower across newly installed tunnel tube to corner of Building 4201/E-2, Test Stand "A" Workshop (demolished in 1985). Note the wooden retaining structure erected in the foreground to retain earth once the tunnel trench is backfilled (this retaining wall remained in 1994). Note also the propellant control piping on the Test Stand "A" platform in the immediate foreground. (JPL negative no. 384-1547-C, 6 February 1957)
- CA-163-A-9** Credit JPL. Photographic copy of drawing, engineering drawing showing structure of Test Stand "A" (Building 4202/E-3) and its relationship to the Monitor Building or blockhouse (Building 4203/E-4) when a reinforced concrete machinery room was added to the west side of Test Stand "A" in 1955. California Institute of Technology, Jet Propulsion Laboratory, Plant Engineering "Electrical Layout -

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Muroc, Test Stand & Refrig[eration] Equip[ement] Room," drawing no. E3/7-0, April 6, 1955.

- CA-163-A-10** Credit WCT. Photographic copy of photograph, view looking south down axis of westernmost tunnel towards Test Stand "A" from future site of Control and Recording Center Building 4221/E-22 (at junction of corrugated steel tunnel tubes). (JPL negative no. 384-1838-A, 9 March 1959)
- CA-163-A-11** Credit BG. View looking northeast at Test Stand "A" complex from road, showing Test Stand "A" test tower (Building 4202/E-3) in left background, Monitor Building 4203/E-4 in right foreground, and barrier (Building 4216/E-17) behind 4203/E-4.
- CA-163-A-12** Credit BG. View east northeast at Test Stand "A" complex from road, showing Test Stand "C" test tower in left background (Building 4217/E-18). Curved I-beam labeled "3-ton" is for small traveling hoist. Fuel tanks, propellant lines, and control panels have been removed from tower.
- CA-163-A-13** Credit BG. View looking west at Test Stand "A" complex in morning sun. View shows Monitor Building 4203/E-4 at left, barrier (Building 4216/E-17) to right of 4203/E-4, and Test Stand "A" tower. Attached structure to lower left of tower is Test Stand "A" machine room which contained refrigeration equipment. Building in right background with Test Stand "A" tower shadow on it is Assembly Building 4288/E-89, built in 1984. Row of ground-mounted brackets in foreground was used to carry electrical cable and/or fuel lines.
- CA-163-A-14** Credit BG. View looking west at Test Stand "A" complex in afternoon sun.
- CA-163-A-15** Credit BG. View looking due west at Test Stand "A" (Building 4202/E-3) along centerline of flame pit. Rocket engines were fired downward in test stand; flames were directed horizontally into the pit to the east via a deflector in the bottom of the stand. Pit contained a small pond and sump, now filled in by silt (See CA-163-A-4 for historical view).
- CA-163-A-16** Credit BG. Detail of north side of Test Stand "A" base, showing tanks for distilled water (left),

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fuel (center), and gaseous nitrogen (right). Other tanks present for tests were removed before this image was taken.

- CA-163-A-17** Credit BG. Detail of east side of Test Stand "A" base, showing flame deflector at bottom of stand. Stairs and handrails were added after test stand was converted to test propellant flow in components as opposed to firing rocket engines.
- CA-163-A-18** Credit BG. View down into vertical flame channel of Test Stand "A" from superstructure. Wooden platform open side faces west.